

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A device to analyze a signal from a light, source, comprising:

means for separating the signal into at least two input signals;
at least two channels respectively possessing a gain and a dynamic range, said channels are each configured to have a converter tube, at least one sensor, and to generate at least one output signal with a first amplitude $A_{j1}(t)$ and a second amplitude $A_{j2}(t)$; and

a device configured to process the output signals, wherein

the device configured to process includes a memory unit configured to store at least one of the first amplitude $A_{j1}(t)$ and second amplitude $A_{j2}(t)$ of the output signals when one of the output signals is below a threshold value and a determination unit configured to determine an amplitude of the signal from the light source, and

said converter tubes are configured to convert the input signal into an electron beam that impacts a screen and said sensor is configured to sense an image on the screen and generate the output signal.

Claim 2 (Currently Amended): The device according to claim 1, wherein the device configured to process further comprises:

a device configured to store a pair of values $(A_{j1}(t), t)$, where t is time, if the first amplitude is smaller than or equal to the threshold value;

a device configured to store a pair of values $(A_{j2}(t), t)$, where t is time, if the second amplitude is greater than the threshold value; and

a device configured to determine, from the stored values $(A_{j1}(t), t)$, $(A_{j2}(t), t)$, a corresponding ~~values~~ value of amplitude of the signal from the light source.

Claim 3 (Previously Presented): The device according to claims 1 or 2, wherein said means for separating the signal from the light source has an attenuation coefficient K determined so that K is smaller than or equal to the dynamic range of at least one of said channels.

Claim 4 (Previously Presented): The device according to claims 1 or 2, wherein the means for separating has an attenuation coefficient K with a value that is substantially equal to the dynamic range of at least one of said channels.

Claim 5 (Previously Presented): The device according to claims 1 or 2, wherein the sensors are streak cameras.

Claim 6 (Previously Presented): The device according to claims 1 or 2, comprising:
 n channels having a dynamic range, where n is an integer, and
 $(n-1)$ means for separating the signal.

7. (Canceled).

Claim 8 (Currently Amended): A method of analyzing a signal from a light source with a wide dynamic range, comprising steps of:

separating the signal to be analyzed into at least two input signals;

making each input signal go through at least one channel including a converter tube, at least one sensor, and each of the channels having a dynamic range;

converting the input signal into an electron beam that illuminates a screen and said sensor senses an image on the screen and generates an output signal[.];

memorizing each output signal coming from the two channels in digital form so as to obtain values of a first amplitude $A_{j1}(t)$ and a second amplitude $A_{j2}(t)$;

reading values of the first amplitude $A_{j1}(t)$ and comparing each of the values with a threshold value;

if the first amplitude $A_{j1}(t)$ is smaller than the threshold value, memorizing the value of the amplitude $A_{j1}(t)$ and a corresponding instant t , where t is time;

if the first amplitude $A_{j1}(t)$ is greater than the threshold value, then memorizing the value $A_{j2}(t)$ and corresponding instant t , where t is time; and

determining the resultant amplitude of the signal from the light source from pairs of values having an amplitude $(A_{j1}(t), t)$, $(A_{j2}(t), t)$.

Claim 9 (Previously Presented): The method according to claim 8, wherein the signal from a light source is separated into several signals, wherein the steps of claim 8 are reiterated for each of the separated signals.

Claim 10 (Previously Presented): The method according to claims 8 or 9, wherein the threshold value corresponds to the value of saturation of the sensor with the smallest dynamic range.

Claim 11 (Previously Presented): The method according to claims 8 or 9, wherein a sensor comprises a streak camera.

Claim 12 (Previously Presented): The method according to claims 8 or 9, wherein the signal from the light source corresponds to a projection of a single laser beam through a slot.

Claim 13 (Previously Presented): The method according to claims 8 or 9, wherein the signal is a linear image coming from a spectrometer or a section of a physical phenomenon.

Claim 14 (Previously Presented): The method according to claims 8 or 9, wherein the signal from a light source is a signal formed by a row of optic fibers, each of the fibers producing a signal.